Qtv:

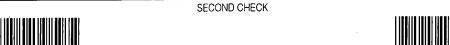
50 Um:

Each

Wednesday, 3/12/2008 1:51:07 PM Date Kim Johnston **Process Sheet** : BOLT **Drawing Name** : CU-DAR001 Dart Helicopters Services Customer Job Number : 37879 : 10372 **Estimate Number** : D312121 Part Number P.O. Number . D3121 REV E : 3/12/2008 S.O. No. : Drawing Number This Issue : N/A : NC Project Number Prsht Rev. ; E : MACHINED PARTS : 11 **Drawing Revision** First Issue Type : 37478 Material Previous Run 3/28/2008 Due Date Written By Checked & Approved By New issue KJ/DS Comment : Est. 04.02.09 Est Rev:B ECN 1060 07-11-12 DD verified by:EC **Additional Product** Job Number: Description: Machine Or Operation: Seq. #: M303H0500 303 HEX BAR 1.0 Comment: Qty.: 0.0417 f(s)/Unit Total: 2.0850 f(s) 303 HEX BAR Material: AISI 303 SS 1/2" Hex Bar (M303H0.500) Batch: 11106789 HARDINGE HARDINGE CNC LATHE SMALL 2.0 Comment: HARDINGE CNC LATHE SMALL 1-Tum D3121-21 2-Identify as D3121-21 3-Deburr break all sharp edges 0.005" to 0.010" INSPECT PARTS AS THEY COME OFF MACHINE QC2 3.0

Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0 QC8



Comment: SECOND CHECK PACKAGING RESOURCE #1

Comment: PACKAGING RESOURCE #1

PACKAGING :

Identify and Stock Location:



di.

5.0

Dart Ae	rospace	Ltd								
W/O:			W	ORK ORDER CH	ANGES					
DATE	STEP	PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
Dort No.		DAD #-	Fault Cat		NO.	2. V			Deter	
Part NO	•	PAR #:	Fault Cat	egory:	NC				_ Date: _ _ Date: _	
NCR:		1	NORK ORI	DER NON-CONFO	RMANCE	(NCR	)			
DATE	STEP	Description of NC Section A	Initial Chief Eng	Corrective Action Action Descrip	Section B	Sign & Date		cation ion C	Approval Chief Eng	Approval QC Inspector

NOTE: Date & initial all entries

Date:

Wednesday, 3/12/2008 1:51:07 PM

User:

Kim Johnston

**Process Sheet** 

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BOLT

Job Number: 37879

Part Number: D312121

Job Number:



Seq. #:

Machine Or Operation:

Description:

6.0

QC21

FINAL INSPECTION/W/O RELEASE



08/04/03

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



mF 08.03-31

Dan Ae	rospace L	ıu						
N/O:			V	ORK ORDER CHANGE	S			
DATE	STEP	PROCEDURE CHANGE			Ву	Date Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
							:	
Part No	<b>:</b>	PAR #:	Fault Ca	tegory:	NCR: Yes	No <b>DQA</b> :	Date: _	
					QA: N/	C Closed:	Date: _	
NCR:			WORK OR	DER NON-CONFORMAN	NCE (NCR			
		Description of NC		Corrective Action Section	ı B	Verification	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspector

NCR:		WORK ORDER NON-SOM ORMANOE (NOR)								
		Description of NC		Corrective Action Section B			Annaval	A		
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector		
					:					
							,			
	1									

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	37879
Description: Bolt	Part Number:	D3121-21
Inspection Dwg: D3121 Rev: E		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Drawing		Actual			3.4.1	
Drawing Dimension	Tolerance	Dimension	Accept	Reject	Method of Inspection	Comments
0.375	+/-0.010	.374				
0.050 - 0.060	N/A	.0555				
0.080	+/-0.010	.079				
10-32UNF3A	N/A					
			<u></u>			
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		<u> </u>				
				: 	****	
					•	

Measured by:	me	Audited by:	Prototype Approval:	N/A
Date:	08/03/27	Date: 08 03 2	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	04.02.27	New Issue	KJ/RF	
В	06.03.09	Dwg Rev. updated	KJ/JLM	
С	06.06.14	Dwg Rev. updated	KJ/JLM ,	
D	08.01.16	Dwg Rev. updated	KJ/EC/DD	77
		<u> </u>		•



	DESIGN DRAWN BY		DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
ı	CHECK	KED	APPROVED	DRAWING NO. REV. E		
		#		D3121 SHEET 1 OF 10		
Ī	DATE			TITLE SCALE		
	07.1	1.07		BRACKET ASSEMBLY 1:2		
	Α		02.04.15	NEW ISSUE		
	В		03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146		
	С		04.02.17	ADD CLEARANCE; USE -241 BEARING		
	D		06.05.17	D3121-25 CAP WAS 1.024, NOW 1.000		

07.11.07



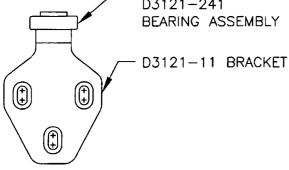
D3121-21 BOLT (1) D3121-241 BEARING ASSEMBLY (1)

Ε

D3121-041 BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-33)

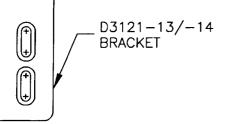
ADD TOLERANCE TO 0.032 (DETAIL B)



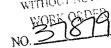
D3121-21 BOLT (1) D3121-241 BEARING ASSEMBLY (1) (2 PLACES)

D3121-043 (SHOWN) / D3121-044 (OPPOSITE) BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-37/-38)



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D3121-21 BOLT (1) D3121-241 BEARING ASSEMBLY (1) (2 PLACES)

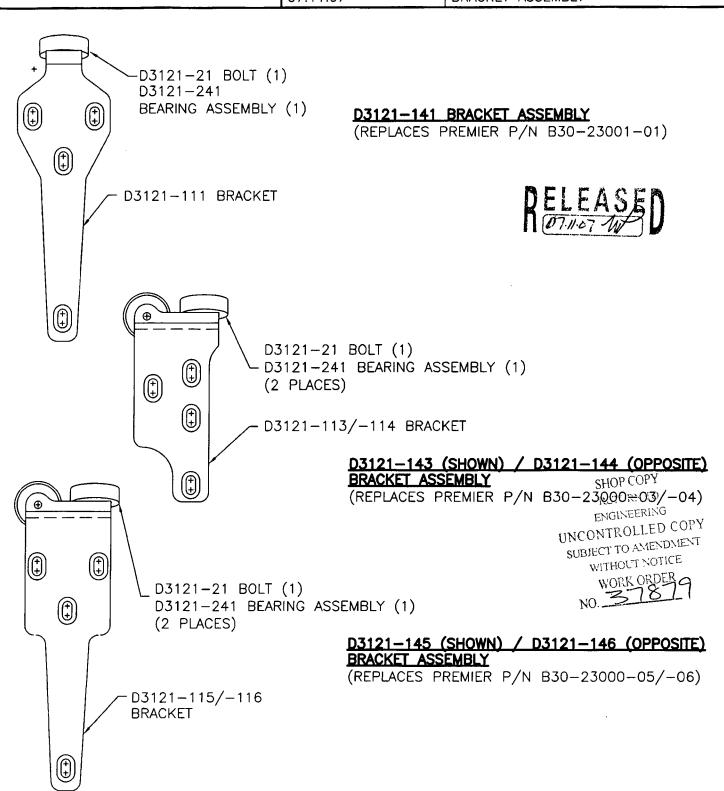
D3121-15/-16 BRACKET

#### D3121-045 (SHOWN) / D3121-046 (OPPOSITE) **BRACKET ASSEMBLY**

(REPLACES PREMIER P/N B30-23000-35/-36)



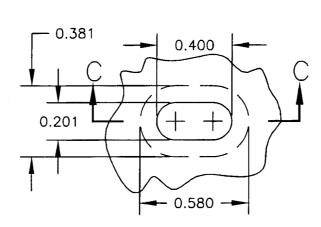
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41	-	D3121	SHEET 2 OF 10
DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:2

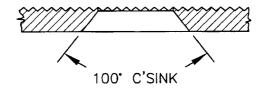




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ľ	CHECKED	APPROVED,	DRAWING NO.	REV. É
١	4	-#	D3121	SHEET 3 OF 10
Ì	DATE		TITLE	SCALE
ļ	07.11.07		BRACKET ASSEMBLY	1:1



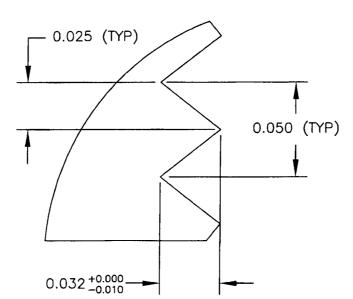




SECTION C-C

# RELEASED

### DETAIL B: RIDGE DETAIL PARTIAL SECTION SCALE 1:20



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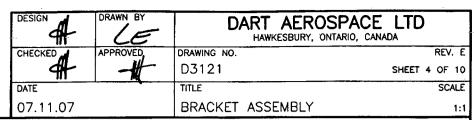
SUBJECT TO AMENDMENT

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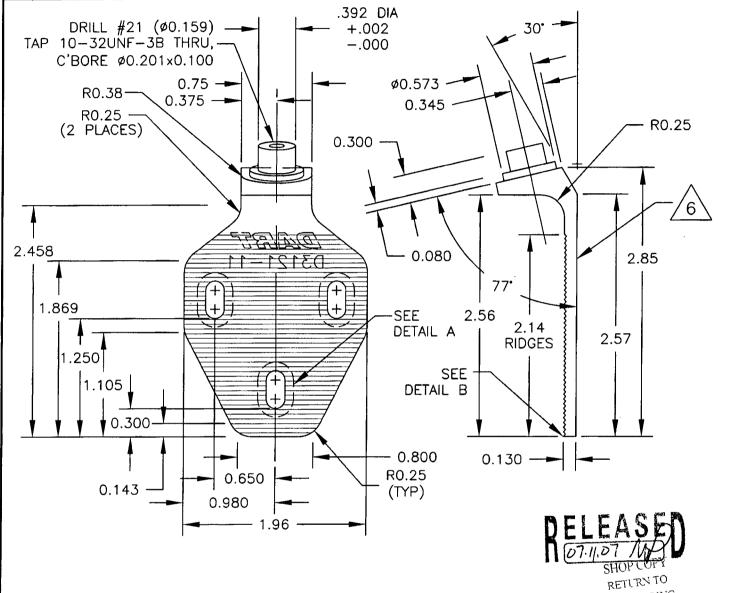




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WORK ORDER



D3121-11 BRACKET

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) MIN ULTIMATE TENSILE = 150 ksi

MIN YIELD TENSILE = 100 ksi

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005



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4	<del>    </del>	D3121	SHEET 5 OF 10
DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:2



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<u> D</u>ASTI

D3121-13

1.220 - 1.800 -

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2.63

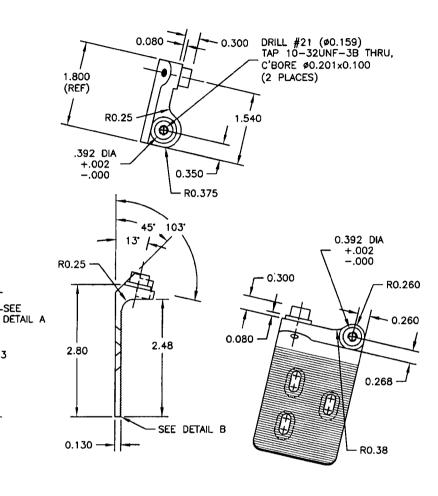
<u>/6\</u>-

0.400

1.280

0.960

0.330 -



D3121-13 BRACKET (SHOWN) D3121-14 BRACKET (OPPOSITE)

SUBJECT TO AMENDMENT .1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) MIN ULTIMATE TENSILE STRENGTH = 150 ksi MIN YIELD TENSILE STRENGTH = 100 ksi

2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

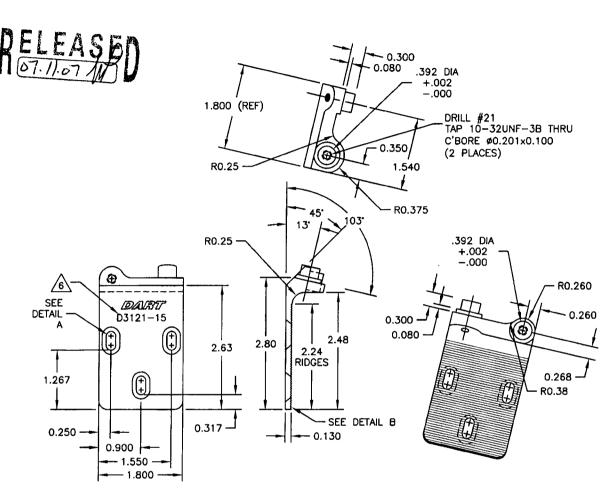
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07.11.07		BRACKET ASSEMBLY	1:2



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## D3121-15 BRACKET (SHOWN) D3121-16 BRACKET (OPPOSITE)

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi

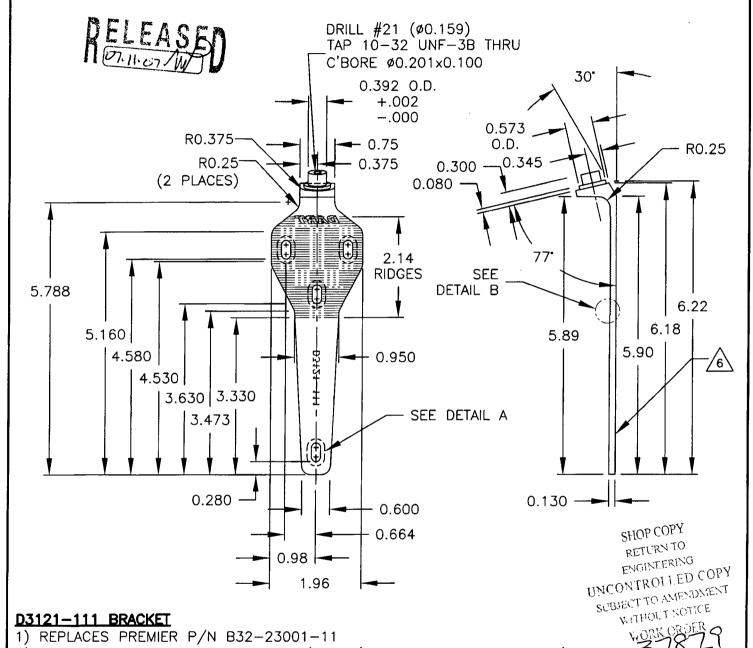
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:2

NO.



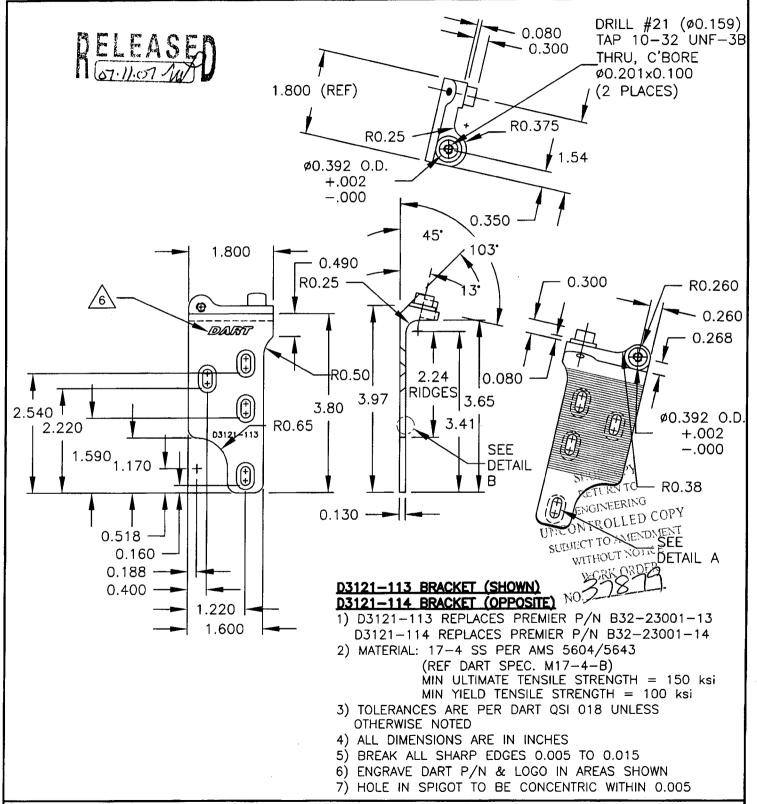
2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) MIN ULTIMATE TENSILE = 150 ksi

MIN YIELD TENSILE = 100 ksi

- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHEWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

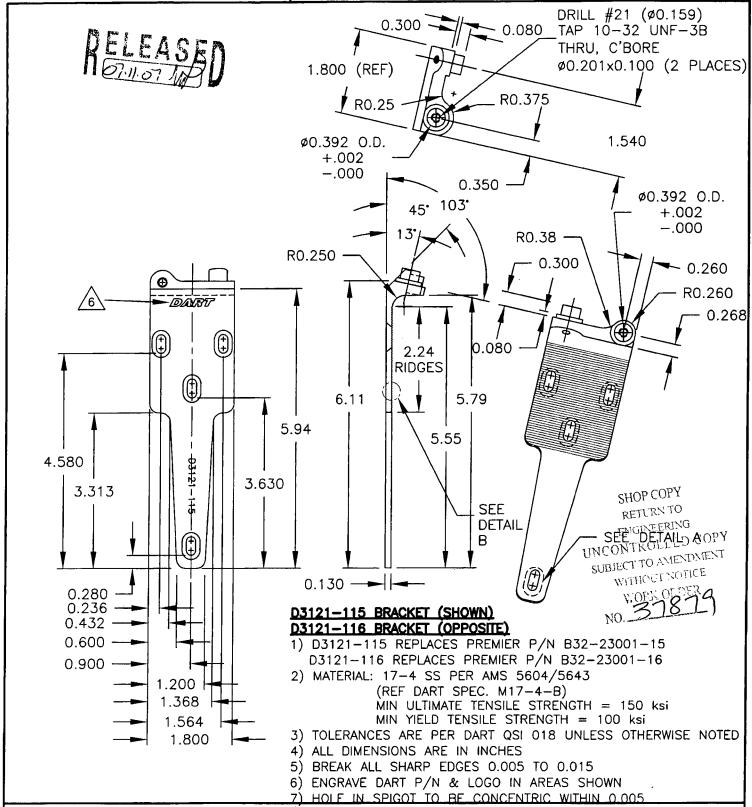


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4	<b>-#</b>	D3121	SHEET 8 OF 10
DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:2



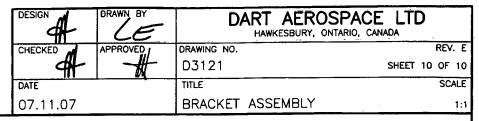


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#	<b>-#</b> -	D3121	SHEET 9 OF 10
DATE		TITLE .	SCALE
07.11.07		BRACKET ASSEMBLY	1:2



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D3121-21 BOLT (SCALE 1:1)

OTHERWISE NOTED

4) ALL DIMENSIONS ARE IN INCHES

1) MATERIAL: AISI 303 SS HEX, ANNEALED

TAP 10-32

UNF-3A

- 0.050 TO 0.060

- 0.080

(REF DART SPEC. M303H0.500)

0.315

∕D\ 1.000 0.838

R0.063

 $\pm 0.002$ 

0.865

 $\pm 0.001$ 

R0.010 -

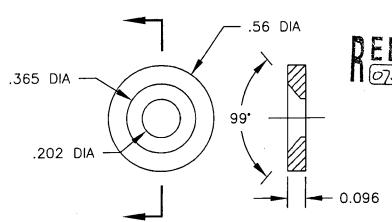
3) TOLERANCES ARE PER DART QSI 018 UNLESS

5) BREAK ALL SHARP EDGES 0.005 TO 0.015

0.230±0.001 -

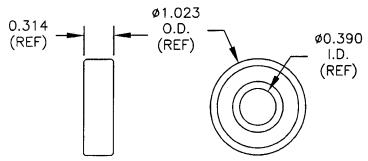
0.375

2) FINISH: NONE



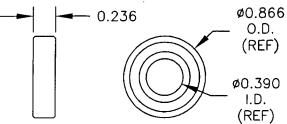
#### D3121-17 WASHER (SCALE 2:1)

- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCÈS ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



#### D3121-19 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES



D3121-23 BEARING (SCALE 1:1)

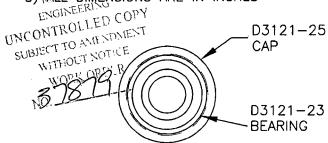
1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z OR KML P/N 6900-ZZ

2) ALL DIMENSIONS ARE IN INCHES

#### D3121-25 CAP (SCALE 1:1)

- 1) MATERIAL: DELRIN ROD, Ø1.25
- (REF DART SPEC. M-DELRIN-R1.250)
  2) TOLERANCES ARE PER DART QSI 018 UNLESS
- SHOTHERWISE NOTED

  3) PAILL RDIMENSIONS ARE IN INCHES



D3121-241 BEARING ASSEBLY (SCALE 1:1)

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